

# FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO  
Solar Turbines Incorporated

AUTHORIZING THE OPERATION OF  
Dallas Overhaul Center  
Steam

LOCATED AT  
Dallas County, Texas  
Latitude 32° 37' 39" Longitude 96° 51' 1"  
Regulated Entity Number: RN100219963

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O1333 Issuance Date: \_\_\_\_\_

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For the Commission

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## **General Terms and Conditions**

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

## **Special Terms and Conditions: Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting**

1. Permit holder shall comply with the following requirements:
  - A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.
  - B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

- C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.
- D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.
- E. Emission units subject to 40 CFR Part 63, Subpart ZZZZ as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1090 which incorporates the 40 CFR Part 63 Subpart by reference.
- F. For the purpose of generating emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 1 (Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 101.302 (relating to General Provisions)
  - (ii) Title 30 TAC § 101.303 (relating to Emission Reduction Credit Generation Certification)
  - (iii) Title 30 TAC § 101.304 (relating to Mobile Emission Reduction Credit Generation and Certification)
  - (iv) Title 30 TAC § 101.309 (relating to Emission Credit Banking and Trading)
  - (v) The terms and conditions by which the emission limits are established to generate the reduction credit are applicable requirements of this permit
- G. For the purpose of generating discrete emission reduction credits through 30 TAC Chapter 101, Subchapter H, Division 4 (Discrete Emission Credit Banking and Trading), the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 101.372 (relating to General Provisions)
  - (ii) Title 30 TAC § 101.373 (relating to Discrete Emission Reduction Credit Generation and Certification)

- (iii) Title 30 TAC § 101.374 (relating to Mobile Discrete Emission Reduction Credit Generation and Certification)
  - (iv) Title 30 TAC § 101.378 (relating to Discrete Emission Credit Banking and Trading)
  - (v) The terms and conditions by which the emission limits are established to generate the discrete reduction credit are applicable requirements of this permit
- 2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):
  - A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements
  - B. Title 30 TAC § 101.3 (relating to Circumvention)
  - C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ
  - D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ
  - E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)
  - F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)
  - G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)
  - H. Title 30 TAC § 101.221 (relating to Operational Requirements)
  - I. Title 30 TAC § 101.222 (relating to Demonstrations)
  - J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)
- 3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:
  - A. Visible emissions from stationary vents with a flow rate of less than 100,000 actual cubic feet per minute and constructed after January 31, 1972 that are not listed in the Applicable Requirements Summary attachment for 30 TAC Chapter 111, Subchapter A, Division 1 , shall not exceed 20% opacity averaged over a six-minute period. The permit holder

shall comply with the following requirements for stationary vents at the site subject to this standard:

- (i) Title 30 TAC § 111.111(a)(1)(B) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(1)(E)
- (iii) Title 30 TAC § 111.111(a)(1)(F)(i), (ii), (iii), or (iv)
- (iv) For emission units with vent emissions subject to 30 TAC § 111.111(a)(1)(B), complying with 30 TAC § 111.111(a)(1)(F)(ii), (iii), or (iv), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146. These periodic monitoring requirements do not apply to vents that are not capable of producing visible emissions such as vents that emit only colorless VOCs; vents from non-fuming liquids; vents that provide passive ventilation, such as plumbing vents; or vent emissions from any other source that does not obstruct the transmission of light. Vents, as specified in the “Applicable Requirements Summary” attachment, that are subject to the emission limitation of 30 TAC § 111.111(a)(1)(B) are not subject to the following periodic monitoring requirements:
  - (1) An observation of stationary vents from emission units in operation shall be conducted at least once during each calendar quarter unless the emission unit is not operating for the entire quarter.
  - (2) For stationary vents from a combustion source, if an alternative to the normally fired fuel is fired for a period greater than or equal to 24 consecutive hours, the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are present. If such period is greater than 3 months, observations shall be conducted once during each quarter. Supplementing the normally fired fuel with natural gas or fuel gas to increase the net heating value to the minimum required value does not constitute creation of an alternative fuel.
  - (3) Records of all observations shall be maintained.
  - (4) Visible emissions observations of emission units operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset.

Visible emissions observations of emission units operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions observations shall be made during times when the activities described in 30 TAC § 111.111(a)(1)(E) are not taking place. Visible emissions shall be determined with each stationary vent in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each stationary vent during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(5) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(1) and (a)(1)(B).
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(1)(F) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- (c) Some vents may be subject to multiple visible emission or monitoring requirements. All credible data must be considered when certifying compliance with this requirement even if the observation or monitoring was performed to demonstrate compliance with a different requirement.
- B. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:
  - (i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)
  - (ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)
  - (iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:
    - (1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.
    - (2) Records of all observations shall be maintained.
    - (3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions



outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

- (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A)
- (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader

C. For visible emissions from all other sources not specified in 30 TAC § 111.111(a)(1), (4), or (7); the permit holder shall comply with the following requirements:

- (i) Title 30 TAC § 111.111(a)(8)(A) (relating to Requirements for Specified Sources)
- (ii) Title 30 TAC § 111.111(a)(8)(B)(i) or (ii)
- (iii) For a source subject to 30 TAC § 111.111(a)(8)(A), complying with 30 TAC § 111.111(a)(8)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO<sub>x</sub>, the permit holder shall also comply with the following

periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

- (1) An observation of visible emissions from a source which is required to comply with 30 TAC § 111.111(a)(8)(A) shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter.
- (2) Records of all observations shall be maintained.
- (3) Visible emissions observations of sources operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of sources operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each source during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.
- (4) Compliance Certification:
  - (a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(8) and (a)(8)(A)
  - (b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(8)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in

compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

- D. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.
- E. For emission units with contributions from uncombined water, the permit holder shall comply with the requirements of 30 TAC § 111.111(b).
- F. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:
  - (i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)
  - (ii) Sources with an effective stack height ( $h_e$ ) less than the standard effective stack height ( $H_e$ ), must reduce the allowable emission level by multiplying it by  $[h_e/H_e]^2$  as required in 30 TAC § 111.151(b)
  - (iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)
- 4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: Storage of Volatile Organic Compounds, the permit holder shall comply with the requirements of 30 TAC § 115.112(e)(1).
- 5. The permit holder shall comply with the following 30 TAC Chapter 115, Subchapter F requirements (relating to Cutback Asphalt Requirements):
  - A. Title 30 TAC § 115.512(2) (relating to Control Requirements)
- 6. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:
  - A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

- B. Title 40 CFR § 60.8 (relating to Performance Tests)
  - C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)
  - D. Title 40 CFR § 60.12 (relating to Circumvention)
  - E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)
  - F. Title 40 CFR § 60.14 (relating to Modification)
  - G. Title 40 CFR § 60.15 (relating to Reconstruction)
  - H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)
7. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

#### **Additional Monitoring Requirements**

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached “Periodic Monitoring Summary” upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent with the averaging time specified in the “Periodic Monitoring Summary,” for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

#### **New Source Review Authorization Requirements**

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule, standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:
- A. Are incorporated by reference into this permit as applicable requirements

- B. Shall be located with this operating permit
  - C. Are not eligible for a permit shield
10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.
  11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time periods that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

### **Compliance Requirements**

12. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.
13. Permit holder shall comply with the following 30 TAC Chapter 117 requirements:
  - A. The permit holder shall comply with the compliance schedules and submit written notification to the TCEQ Executive Director as required in 30 TAC Chapter 117, Subchapter H, Division 1:
    - (i) For sources in the Dallas-Fort Worth Eight-Hour Nonattainment area, 30 TAC § 117.9030
  - B. The permit holder shall comply with the Initial Control Plan unit identification requirements in 30 TAC § 117.450(a) and (a)(1).

- C. The permit holder shall comply with the requirements of 30 TAC § 117.454 for Final Control Plan Procedures for Attainment Demonstration Emission Specifications and 30 TAC § 117.456 for Revision of Final Control Plan.
14. Use of Emission Credits to comply with applicable requirements:
- A. Unless otherwise prohibited, the permit holder may use emission credits to comply with the following applicable requirements listed elsewhere in this permit:
    - (i) Title 30 TAC Chapter 115
    - (ii) Title 30 TAC Chapter 117
    - (iii) Offsets for Title 30 TAC Chapter 116
  - B. The permit holder shall comply with the following requirements in order to use the emission credits to comply with the applicable requirements:
    - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.306(c)(2)
    - (ii) The emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 1
    - (iii) The executive director has approved the use of the credit according to 30 TAC § 101.306(c)(2)
    - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.302(g) and 30 TAC Chapter 122
    - (v) Title 30 TAC § 101.305 (relating to Emission Reductions Achieved Outside the United States)
15. Use of Discrete Emission Credits to comply with the applicable requirements:
- A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:
    - (i) Title 30 TAC Chapter 115
    - (ii) Title 30 TAC Chapter 117
    - (iii) If applicable, offsets for Title 30 TAC Chapter 116
    - (iv) Temporarily exceed state NSR permit allowables

- B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:
  - (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)
  - (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4
  - (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)
  - (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122
  - (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

### **Protection of Stratospheric Ozone**

- 16. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:
  - A. Any on site servicing, maintenance, and repair on refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants or non-exempt substitutes shall be conducted in accordance with 40 CFR Part 82, Subpart F. Permit holders shall ensure that repairs on or refrigerant removal from refrigeration and nonmotor vehicle air-conditioning appliances using ozone-depleting refrigerants are performed only by properly certified technicians using certified equipment. Records shall be maintained as required by 40 CFR Part 82, Subpart F.
  - B. The permit holder shall comply with 40 CFR Part 82, Subpart F related to the disposal requirements for appliances using Class I or Class II (ozone-depleting) substances or non-exempt substitutes as specified in 40 CFR §§ 82.150 - 82.166 and the applicable Part 82 Appendices.
  - C. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

**Permit Location**

17. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.



## **Attachments**

**Applicable Requirements Summary**

**Additional Monitoring Requirements**

**New Source Review Authorization References**

**Applicable Requirements Summary**

**Unit Summary .....17**

**Applicable Requirements Summary ..... 18**

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

### Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
DIESEL UNL	Loading/Unloading Operations	N/A	R5212-DIESEL	30 TAC Chapter 115, Loading and Unloading of VOC	No changing attributes.
EG2	SRIC Engines	N/A	60JJJJ-EG	40 CFR Part 60, Subpart JJJJ	No changing attributes.
EG2	SRIC Engines	N/A	63ZZZZ-EG	40 CFR Part 63, Subpart ZZZZ	No changing attributes.
GRPCT	Solvent Degreasing Machines	ADT1, PC1, PC2, PC3	R5412	30 TAC Chapter 115, Degreasing Processes	No changing attributes.
GRPOWS	Volatile Organic Compound Water Separators	S1, S2	R5131	30 TAC Chapter 115, Water Separation	No changing attributes.
GRPTC	Emission Points/Stationary Vents/Process Vents	TC1, TC4, TC5, TC6	R1111HIFLO	30 TAC Chapter 111, Visible Emissions	No changing attributes.
INPLANTBLST	Miscellaneous Units	N/A	R1111-B1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
INPLANTPAINT	Miscellaneous Units	N/A	R1111-PS1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
PROPSB1	Surface Coating Operations	N/A	R5450EXEMPT	30 TAC Chapter 115, Subchapter E, Division 5	Application System = The surface coating or surface coating process used is specified in §115.451(f)(1)-(7).
PROPSB1	Surface Coating Operations	N/A	R5450NORMAL	30 TAC Chapter 115, Subchapter E, Division 5	Application System = The surface coating or surface coating process is not specified in §155.451(f)(1)- (7).

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
DIESEL UNL	EU	R5212-DIESEL	VOC	30 TAC Chapter 115, Loading and Unloading of VOC	§ 115.217(a)(1) § 115.212(a)(2) § 115.214(a)(1)(B) § 115.214(a)(1)(D) § 115.214(a)(1)(D)(i)	Vapor pressure (at land-based operations). All land-based loading and unloading of VOC with a true vapor pressure less than 0.5 psia is exempt from the requirements of this division, except as specified.	§ 115.214(a)(1)(A) § 115.214(a)(1)(A)(i) § 115.215 § 115.215(4)	§ 115.216 § 115.216(2) § 115.216(3)(B)	None
EG2	EU	60JJJJ-EG	CO	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than 25 HP and less than 130 HP and were manufactured on or after 01/01/2009 must comply with a CO emission limit of 387 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(c)	§ 60.4243(a)(1) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
EG2	EU	60JJJJ-EG	HC and NO <sub>x</sub>	40 CFR Part 60, Subpart JJJJ	§ 60.4233(d)-Table1 § 60.4234 § 60.4243(b) § 60.4243(b)(1) [G]§ 60.4243(d) § 60.4246	Owners and operators of stationary emergency SI ICE with a maximum engine power greater than 25 HP and less than 130 HP and were manufactured on or after 01/01/2009 must comply with an HC+NO <sub>x</sub> emission limit of 10 g/HP-hr, as listed in Table 1 to this subpart.	§ 60.4237(c)	§ 60.4243(a)(1) § 60.4245(a)(1) § 60.4245(a)(2) § 60.4245(a)(3) § 60.4245(b)	None
EG2	EU	63ZZZZ-EG	112(B) HAPS	40 CFR Part 63, Subpart ZZZZ	§ 63.6590(c)	Stationary RICE subject to Regulations under 40 CFR Part 60. An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition	None	None	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines as applicable. No further requirements apply for such engines under this part.			
GRPCT	EU	R5412	VOC	30 TAC Chapter 115, Degreasing Processes	§ 115.412(1) [G]§ 115.412(1)(A) § 115.412(1)(C) § 115.412(1)(E) [G]§ 115.412(1)(F) § 115.417(1)	Cold solvent cleaning. No person shall own or operate a system utilizing a VOC for the cold solvent cleaning of objects without the controls listed in §115.412(1)(A)-(F).	[G]§ 115.415(1) § 115.415(3) ** See Periodic Monitoring Summary	None	None
GRPOWS	EU	R5131	VOC	30 TAC Chapter 115, Water Separation	§ 115.137(a)(2) [G]§ 115.132(a)(4)	Any single or multiple compartment VOC water separator which separates materials having a true vapor pressure of VOC < .5 psia obtained from any equipment is exempt from §115.132(a).	[G]§ 115.135(a) § 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	§ 115.136(a)(1) § 115.136(a)(3) § 115.136(a)(4)	None
GRPTC	EP	R1111HIFLO	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
INPLANT BLST	EU	R1111-B1	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(8)(A)	Visible emissions shall not be permitted to exceed an opacity of 30% for any six-minute period from all other sources not specified in this section.	[G]§ 111.111(a)(8)(B) ** See Periodic Monitoring Summary	None	None
INPLANT PAINT	EU	R1111-PS1	PM (OPACITY)	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(8)(A)	Visible emissions shall not be permitted to exceed an opacity of 30% for any six-minute period from all other sources not specified in this section.	[G]§ 111.111(a)(8)(B) ** See Periodic Monitoring Summary	None	None

## Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
PROPSB1	PRO	R5450EX EMPT	VOC	30 TAC Chapter 115, Subchapter E, Division 5	§ 115.453(a)(1)(C)-Table 1 § 115.453(a) § 115.453(a)(1) § 115.453(a)(1)(C) § 115.453(d)(1) § 115.453(d)(1)(A) § 115.453(d)(1)(B) § 115.453(d)(1)(C) § 115.453(d)(1)(D) § 115.453(d)(1)(E) § 115.453(d)(2) § 115.453(d)(2)(A) § 115.453(d)(2)(B) § 115.453(d)(2)(C) § 115.453(d)(2)(D) § 115.453(d)(2)(E) § 115.453(d)(2)(F) § 115.453(d)(2)(G)	The VOC content of air-dried coating applied to miscellaneous metal parts and products shall not exceed the pounds of VOC per gallon of coating listed in Table 1.	§ 115.455(a) [G]§ 115.455(a)(1) § 115.455(a)(5) § 115.455(b) § 60.446(a) § 60.446(b) § 60.446(c)	§ 115.458(b)(1) § 115.458(b)(2) § 115.458(b)(6) § 115.458(b)(7)	None
PROPSB1	PRO	R5450NO RMAL	VOC	30 TAC Chapter 115, Subchapter E, Division 5	§ 115.453(a)(1)(C)-Table 1 § 115.453(a) § 115.453(a)(1) § 115.453(a)(1)(C) [G]§ 115.453(c) § 115.453(d)(1) § 115.453(d)(1)(A) § 115.453(d)(1)(B) § 115.453(d)(1)(C) § 115.453(d)(1)(D) § 115.453(d)(1)(E) § 115.453(d)(2) § 115.453(d)(2)(A) § 115.453(d)(2)(B) § 115.453(d)(2)(C) § 115.453(d)(2)(D) § 115.453(d)(2)(E) § 115.453(d)(2)(F) § 115.453(d)(2)(G)	The VOC content of air-dried coating applied to miscellaneous metal parts and products shall not exceed the pounds of VOC per gallon of coating listed in Table 1.	§ 115.455(a) [G]§ 115.455(a)(1) § 115.455(a)(5) § 115.455(b) § 60.446(a) § 60.446(b) § 60.446(c)	§ 115.458(b)(1) § 115.458(b)(2) § 115.458(b)(6) § 115.458(b)(7)	None

**Additional Monitoring Requirements**

**Periodic Monitoring Summary..... 22**

## Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPCT	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Degreasing Processes	SOP Index No.: R5412
Pollutant: VOC	Main Standard: § 115.412(1)
Monitoring Information	
Indicator: Visual Inspection	
Minimum Frequency: monthly	
Averaging Period: n/a	
Deviation Limit: Noncompliance with applicable portions of 115.412(1)(A)-(F)	
Periodic Monitoring Text: Inspect equipment and record data monthly to ensure compliance with any applicable requirements in § 115.412(1)(A)-(F). Any monitoring data which indicates that the cold cleaner is not in compliance with the applicable requirements of § 115.412(1)(A)-(F) shall be considered and reported as a deviation.	



## Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: GRPTC	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111HIFLO
Pollutant: PM (OPACITY)	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Once per week	
Averaging Period: n/a	
Deviation Limit: Opacity shall not exceed 15% averaged over a six-minute period.	
<p>Periodic Monitoring Text: Visible emissions observations shall be made and recorded. Note that to properly determine the presence of visible emissions, all sources must be in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the emission source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. If the observations cannot be conducted due to weather conditions, the date, time, and specific weather conditions shall be recorded. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor.</p> <p>If visible emissions are observed, the permit holder shall report a deviation. As an alternative, the permit holder may determine the opacity consistent with Test Method 9, as soon as practicable, but no later than 24 hours after observing visible emissions.</p> <p>If the result of the Test Method 9 is an opacity above the corresponding opacity limit, the permit holder shall report a deviation.</p>	

## Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: INPLANTBLST	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-B1
Pollutant: PM (OPACITY)	Main Standard: § 111.111(a)(8)(A)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Quarterly	
Averaging Period: N/A	
Deviation Limit: Opacity limit of 30% for abrasive blast operations.	
<p>Periodic Monitoring Text: An observation of visible emissions from the source shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter. Records of all observations shall be maintained.</p> <p>Visible emissions observations of the source operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions shall be determined with the source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. The determination of visible emissions shall be made at the nearest property line downwind of the source or within 500 feet of the source, whichever is closer to the source. A certified opacity reader is not required for visible emissions observations.</p> <p>If visible emissions are not present at the prescribed points of observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC §111.111(a)(8) and (a)(8)(A).</p> <p>However, if visible emissions are present at observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC §122.145(2) or conduct the appropriate opacity test specified in 30 TAC §111.111(a)(8)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC §122.145(2). The</p>	

opacity test must be performed by a certified opacity reader.

Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

## Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: INPLANTPAINT	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: R1111-PS1
Pollutant: PM (OPACITY)	Main Standard: § 111.111(a)(8)(A)
Monitoring Information	
Indicator: Visible Emissions	
Minimum Frequency: Quarterly	
Averaging Period: N/A	
Deviation Limit: Opacity limit of 30% for spray paint operations.	
<p>Periodic Monitoring Text: An observation of visible emissions from the source shall be conducted at least once during each calendar quarter unless the source is not operating for the entire quarter. Records of all observations shall be maintained.</p> <p>Visible emissions observations of the source operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions shall be determined with the source in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 miles, away from the source during the observation. The observer shall select a position where the sun is not directly in the observer's eyes. The determination of visible emissions shall be made at the nearest property line downwind of the source or within 500 feet of the source, whichever is closer to the source. A certified opacity reader is not required for visible emissions observations.</p> <p>If visible emissions are not present at the prescribed points of observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC §111.111(a)(8) and (a)(8)(A).</p> <p>However, if visible emissions are present at observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC §122.145(2) or conduct the appropriate opacity test specified in 30 TAC §111.111(a)(8)(B) to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC §122.145(2). The</p>	

opacity test must be performed by a certified opacity reader.

Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

**New Source Review Authorization References**

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**New Source Review Authorization References by Emission Unit.....30**

## New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

<b>Nonattainment (NA) Permits</b>	
NA Permit No.: N196	Issuance Date: 12/23/2015
<b>Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.</b>	
Authorization No.: 20041	Issuance Date: 12/23/2015
<b>Permits By Rule (30 TAC Chapter 106) for the Application Area</b>	
Number: 106.183	Version No./Date: 06/18/1997
Number: 106.227	Version No./Date: 09/04/2000
Number: 106.263	Version No./Date: 11/01/2001
Number: 106.265	Version No./Date: 09/04/2000
Number: 106.375	Version No./Date: 08/04/1998
Number: 106.454	Version No./Date: 11/01/2001
Number: 106.472	Version No./Date: 09/04/2000
Number: 106.511	Version No./Date: 09/04/2000
Number: 51	Version No./Date: 05/04/1994
Number: 75	Version No./Date: 09/12/1989
Number: 102	Version No./Date: 10/04/1995

### New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization
ADT1	AQUEOUS DIP TANK	106.375/08/04/1998
DIESEL UNL	DIESEL UNLOADING OPERATIONS	106.472/09/04/2000
EG2	EMERGENCY GENERATOR	106.511/09/04/2000
INPLANTBLST	ABRASIVE BLAST OPERATIONS	106.263/11/01/2001
INPLANTPAINT	SPRAY PAINT OPERATIONS	106.263/11/01/2001
PC1	PARTS CLEANER NO. 1	106.454/11/01/2001
PC2	PARTS CLEANER NO. 2	106.454/11/01/2001
PC3	PARTS CLEANER NO. 3	106.454/11/01/2001
PROPSB1	PROPSB1	075/09/12/1989
S1	OIL / WATER SEPARATOR	20041, N196
S2	TC6 OIL/WATER SEPARATOR	20041, N196
TC1	TEST CELL NO. 1	20041, N196
TC4	TEST CELL NO. 4	20041, N196
TC5	TEST CELL NO. 5	20041, N196
TC6	TEST CELL NO. 6	20041, N196



## **Appendix A**

<b>Acronym List .....</b>	<b>32</b>
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## Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM .....	actual cubic feet per minute
AMOC .....	alternate means of control
ARP .....	Acid Rain Program
ASTM .....	American Society of Testing and Materials
B/PA .....	Beaumont/Port Arthur (nonattainment area)
CAM .....	Compliance Assurance Monitoring
CD .....	control device
COMS .....	continuous opacity monitoring system
CVS .....	closed-vent system
D/FW .....	Dallas/Fort Worth (nonattainment area)
DR .....	Designated Representative
ELP .....	El Paso (nonattainment area)
EP .....	emission point
EPA .....	U.S. Environmental Protection Agency
EU .....	emission unit
FCAA Amendments .....	Federal Clean Air Act Amendments
FOP .....	federal operating permit
GF .....	grandfathered
gr/100 scf .....	grains per 100 standard cubic feet
HAP .....	hazardous air pollutant
H/G/B .....	Houston/Galveston/Brazoria (nonattainment area)
H <sub>2</sub> S .....	hydrogen sulfide
ID No. ....	identification number
lb/hr .....	pound(s) per hour
MMBtu/hr .....	Million British thermal units per hour
MRRT .....	monitoring, recordkeeping, reporting, and testing
NA .....	nonattainment
N/A .....	not applicable
NADB .....	National Allowance Data Base
NO <sub>x</sub> .....	nitrogen oxides
NSPS .....	New Source Performance Standard (40 CFR Part 60)
NSR .....	New Source Review
ORIS .....	Office of Regulatory Information Systems
Pb .....	lead
PBR .....	Permit By Rule
PM .....	particulate matter
ppmv .....	parts per million by volume
PSD .....	prevention of significant deterioration
RO .....	Responsible Official
SO <sub>2</sub> .....	sulfur dioxide
TCEQ .....	Texas Commission on Environmental Quality
TSP .....	total suspended particulate
TVP .....	true vapor pressure
U.S.C. ....	United States Code
VOC .....	volatile organic compound

**Appendix B**

**Major NSR Summary Table..... 34**

## Major NSR Summary Table

Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY(4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
TC1	Test Cell 1 – Gas Fuel Firing	NO <sub>x</sub>	106.9			9, 10	
		CO	84.8			9, 10	
		VOC	46.6			9, 10	
		PM	5.3		2, 5	9, 10	
		PM <sub>10</sub>	5.3		2, 5	9, 10	
		PM <sub>2.5</sub>	5.3		2, 5	9, 10	
		SO <sub>2</sub>	2.0			9, 10	
TC1	Test Cell 1 – Liquid Fuel Firing	NO <sub>x</sub>	181.5			9, 10	
		CO	88.8			9, 10	
		VOC	20.4			9, 10	
		PM	15.7		2, 5	9, 10	
		PM <sub>10</sub>	15.7		2, 5	9, 10	
		PM <sub>2.5</sub>	15.7		2, 5	9, 10	
		SO <sub>2</sub>	7.5			9, 10	
TC1	Test Cell 1 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		100.2		9, 10	
		CO		27.7		9, 10	
		VOC		9.4		9, 10	
		PM		10.7	2, 5	9, 10	
		PM <sub>10</sub>		10.7	2, 5	9, 10	
		PM <sub>2.5</sub>		10.7	2, 5	9, 10	
		SO <sub>2</sub>		2.9		9, 10	
TC2	Test Cell 2 – Gas Fuel Firing	NO <sub>x</sub>	8.7			9, 10	
		CO	18.4			9, 10	
		VOC	4.7			9, 10	
		PM	0.7		2, 5	9, 10	
		PM <sub>10</sub>	0.7		2, 5	9, 10	

Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Spec. Cond.	Recordkeeping Requirements Spec. Cond.	Reporting Requirements Spec. Cond.
			lb/hr	TPY(4)			
		PM <sub>2.5</sub>	0.7		2, 5	9, 10	
		SO <sub>2</sub>	0.4			9, 10	
TC2	Test Cell 2 – Liquid Fuel Firing	NO <sub>x</sub>	13.0			9, 10	
		CO	37.0			9, 10	
		VOC	4.7			9, 10	
		PM	3.5		2, 5	9, 10	
		PM <sub>10</sub>	3.5		2, 5	9, 10	
		PM <sub>2.5</sub>	3.5		2, 5	9, 10	
		SO <sub>2</sub>	1.5			9, 10	
TC2	Test Cell 2 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		8.7		9, 10	
		CO		9.2		9, 10	
		VOC		0.9		9, 10	
		PM		1.9	2, 5	9, 10	
		PM <sub>10</sub>		1.9	2, 5	9, 10	
		PM <sub>2.5</sub>		1.9	2, 5	9, 10	
		SO <sub>2</sub>		0.8		9, 10	
TC3	Test Cell 3 – Gas Fuel Firing	NO <sub>x</sub>	80.0			9, 10	
		CO	84.8			9, 10	
		VOC	13.5			9, 10	
		PM	2.5		2, 5	9, 10	
		PM <sub>10</sub>	2.5		2, 5	9, 10	
		PM <sub>2.5</sub>	2.5		2, 5	9, 10	
		SO <sub>2</sub>	1.1			9, 10	
TC3	Test Cell 3 – Liquid Fuel Firing	NO <sub>x</sub>	120.0			9, 10	
		CO	45.6			9, 10	
		VOC	7.2			9, 10	
		PM	15.7		2, 5	9, 10	
		PM <sub>10</sub>	15.7		2, 5	9, 10	
		PM <sub>2.5</sub>	15.7		2, 5	9, 10	
		SO <sub>2</sub>	4.8			9, 10	

Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Spec. Cond.	Recordkeeping Requirements Spec. Cond.	Reporting Requirements Spec. Cond.
			lb/hr	TPY(4)			
TC3	Test Cell 3 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		35.9		9, 10	
		CO		19.4		9, 10	
		VOC		1.8		9, 10	
		PM		10.7	2, 5	9, 10	
		PM <sub>10</sub>		10.7	2, 5	9, 10	
		PM <sub>2.5</sub>		10.7	2, 5	9, 10	
		SO <sub>2</sub>		2.7		9, 10	
TC4	Test Cell 4 – Gas Fuel Firing	NO <sub>x</sub>	106.9			9, 10	
		CO	84.8			9, 10	
		VOC	46.6			9, 10	
		PM	5.3		2, 5	9, 10	
		PM <sub>10</sub>	5.3		2, 5	9, 10	
		PM <sub>2.5</sub>	5.3		2, 5	9, 10	
		SO <sub>2</sub>	2.0			9, 10	
TC4	Test Cell 4 – Liquid Fuel Firing	NO <sub>x</sub>	181.5			9, 10	
		CO	41.3			9, 10	
		VOC	14.3			9, 10	
		PM	15.7		2, 5	9, 10	
		PM <sub>10</sub>	15.7		2, 5	9, 10	
		PM <sub>2.5</sub>	15.7		2, 5	9, 10	
		SO <sub>2</sub>	7.5			9, 10	
TC4	Test Cell 4 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		100.2		9, 10	
		CO		27.7		9, 10	
		VOC		9.4		9, 10	
		PM		10.7	2, 5	9, 10	
		PM <sub>10</sub>		10.7	2, 5	9, 10	
		PM <sub>2.5</sub>		10.7	2, 5	9, 10	
		SO <sub>2</sub>		2.9		9, 10	

Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Spec. Cond.	Recordkeeping Requirements Spec. Cond.	Reporting Requirements Spec. Cond.
			lb/hr	TPY(4)			
TC5	Test Cell 5 – Gas Fuel Firing	NO <sub>x</sub>	192.8			9, 10	
		CO	30.0			9, 10	
		VOC	8.8			9, 10	
		PM	8.5		2, 5	9, 10	
		PM <sub>10</sub>	8.5		2, 5	9, 10	
		PM <sub>2.5</sub>	8.5		2, 5	9, 10	
		SO <sub>2</sub>	3.8			9, 10	
TC5	Test Cell 5 – Liquid Fuel Firing	NO <sub>x</sub>	338.8			9, 10	
		CO	30.0			9, 10	
		VOC	8.8			9, 10	
		PM	12.1		2, 5	9, 10	
		PM <sub>10</sub>	12.1		2, 5	9, 10	
		PM <sub>2.5</sub>	12.1		2, 5	9, 10	
		SO <sub>2</sub>	14.1			9, 10	
TC5	Test Cell 5 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		39.5		9, 10	
		CO		9.0		9, 10	
		VOC		2.7		9, 10	
		PM		3.7	2, 5	9, 10	
		PM <sub>10</sub>		3.7	2, 5	9, 10	
		PM <sub>2.5</sub>		3.7	2, 5	9, 10	
		SO <sub>2</sub>		2.0		9, 10	
TC6	Test Cell 6 – Gas Fuel Firing	NO <sub>x</sub>	298.43			9, 10	
		CO	26.00			9, 10	
		VOC	1.49			9, 10	
		PM	4.21		2, 5	9, 10	
		PM <sub>10</sub>	4.21		2, 5	9, 10	
		PM <sub>2.5</sub>	4.21		2, 5	9, 10	
		SO <sub>2</sub>	0.35			9, 10	
TC6	Test Cell 6 – Liquid Fuel Firing	NO <sub>x</sub>	409.53			9, 10	

Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY(4)	Spec. Cond.	Spec. Cond.	Spec. Cond.
		CO	26.29			9, 10	
		VOC	7.50			9, 10	
		PM	13.60		2, 5	9, 10	
		PM <sub>10</sub>	13.60		2, 5	9, 10	
		PM <sub>2.5</sub>	13.60		2, 5	9, 10	
		SO <sub>2</sub>	3.04			9, 10	
TC6	Test Cell 6 – Annual Emission Rate – Gas and Liquid Fuel Firing	NO <sub>x</sub>		39.78		9, 10	
		CO		7.95		9, 10	
		VOC		0.82		9, 10	
		PM		1.85	2, 5	9, 10	
		PM <sub>10</sub>		1.85	2, 5	9, 10	
		PM <sub>2.5</sub>		1.85	2, 5	9, 10	
		SO <sub>2</sub>		0.76		9, 10	
F1	TC1, TC3-5 Process Fugitives (5)	VOC	0.6	0.3			
F2	TC2 Process Fugitives (5)	VOC	0.3	0.1			
F3	TC6 Process Fugitives (5)	VOC	0.01	0.01			
S1	Oil/Water Separator	VOC	0.1	0.3			
S2	TC6 Oil/Water Separator	VOC	0.01	0.05			
CT1	Cooling Tower	VOC	0.08	0.37			
		PM	0.60	2.63			
		PM <sub>10</sub>	0.15	0.66			
		PM <sub>2.5</sub>	0.01	0.03			
		Cl <sub>2</sub>	<0.01	<0.01			
CT3	Cooling Tower	VOC	0.1	0.4			
		PM	0.60	2.63			
		PM <sub>10</sub>	0.15	0.66			
		PM <sub>2.5</sub>	0.01	0.03			
		Cl <sub>2</sub>	<0.01	<0.01			
CT4	TC6 Cooling Tower	VOC	0.08	0.37			



Permit Number: 20041; N196					Issuance Date: 12/23/2015		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements Spec. Cond.	Recordkeeping Requirements Spec. Cond.	Reporting Requirements Spec. Cond.
			lb/hr	TPY(4)			
		PM	0.60	0.26			
		PM <sub>10</sub>	0.02	0.09			
		PM <sub>2.5</sub>	<0.01	<0.01			
		Cl <sub>2</sub>	<0.01	<0.01			

Footnotes:

- (1) Emission point identification - either specific equipment designation or emission point number from plot plan.
- (2) Specific point source name. For fugitive sources, use area name or fugitive source name.
- (3) NO<sub>x</sub> - total oxides of nitrogen
  - CO - carbon monoxide
  - VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
  - PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>
  - PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>
  - PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter
  - SO<sub>2</sub> - sulfur dioxide
  - Cl<sub>2</sub> - chlorine
- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.
- (5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.



## Texas Commission on Environmental Quality Air Quality Permit

*A Permit Is Hereby Issued To*  
**Solar Turbines Incorporated**  
*Authorizing the Continued Operation of*  
**Solar Turbines DLS Overhaul Center**  
*Located at Desoto, Dallas County, Texas*  
*Latitude 32° 37' 39" Longitude 96° 51' 1"*

Permits: 20041 and N196

Issuance Date: December 23, 2015

Expiration Date: December 23, 2025

A handwritten signature in black ink, appearing to read "R. D. A. Hyle".

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)]<sup>1</sup>
2. **Voiding of Permit.** A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1) the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of \$5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress.** Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification.** The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements.** If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling

facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]

6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]
8. **Maximum Allowable Emission Rates.** The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled “Emission Sources--Maximum Allowable Emission Rates.” [30 TAC § 116.115(b)(2)(F)]<sup>1</sup>
9. **Maintenance of Emission Control.** The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules.** Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to “air pollution” as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit.<sup>1</sup>

<sup>1</sup> Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

## **SPECIAL CONDITIONS**

Permit Number 20041 and N196

### **Emission Standards, Fuel Specifications, and Operational Limitations**

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates (MAERT)," and those sources are limited to the emission limits and other conditions specified in that attached table. Compliance with the annual emission limits shall be based on a rolling 12-month year rather than the calendar year.

If any condition or limitation of this permit or of any Texas Commission on Environmental Quality (TCEQ) regulation is more stringent than another, then the more stringent condition or limitation shall govern and be the standard by which compliance will be demonstrated.

2. Opacity of emissions from Emission Point Nos. (EPNs): TC2 and TC3 must not exceed 20 percent; EPNs: TC1, TC4, and TC6 must not exceed 15 percent and EPN: TC5 must not exceed 10 percent averaged over a six-minute period except for those periods described in Title 30 Texas Administrative Code § 111.111(a)(1)(E). Opacity shall be determined by using the U.S. Environmental Protection Agency Method 9. **(12/14)**
3. Fuel fired in the turbines under testing is limited to one of the following:
  - A. Pipeline-quality, sweet natural gas containing no more than 5.0 grains total sulfur per 100 dry standard cubic feet.
  - B. Distillate fuel oil containing no more than 0.05 weight percent total sulfur for EPNs: TC1 through TC5. **(12/14)**
  - C. Distillate fuel oil for EPN: TC6 is limited to a sulfur content of 15 parts per million, wet. **(12/14)**
  - D. Distillate fuel oil may not be fired in a test cell for more than 16 hours per day. In addition, no more than two test cells among EPNs: TC1 through TC5 may fire distillate fuel oil concurrently. **(12/14)**
4. All parking lots and plant roads shall be paved and regularly cleaned to achieve maximum control of dust emissions.
5. A visual check of the test cell exhaust shall be made on each turbine immediately after startup, while idling, and at each test load. If visible emissions are expected to be present for more than the six minutes allowed in 30 TAC § 111.111(a)(1)(E) for the initial start-up, or if visible emissions occur while idling or after a test load change, the unit under test shall be shut down as soon as practicable and not restarted until the cause of the excess emissions has been corrected. **(08/10)**
6. Contaminated lubricating oil drained from the turbines shall be washed down the waste oil handling system as soon as practicable.

7. All lubricating oil and fuel oil spills shall be cleaned up immediately or washed into the waste oil handling system as soon as practicable.
8. Waste lubricating oil shall be stored in closed containers until shipped off-site by an authorized waste disposal service.

### **Continuing Demonstration of Compliance**

9. To demonstrate compliance with Special Condition No. 1, actual emissions of nitrogen oxides, carbon monoxide, volatile organic compounds, and particulate matter from each test cell will be calculated according to the following formula: **(08/10)**

Emissions = Nominal or Engine-Specific Emission Factor x Actual Fuel Usage during the Test

- A. Emissions must be in pounds per hour (lb/hr);
- B. The emission factor must be in pounds of pollutant per pound of fuel (lb of emissions/lb of fuel) or pounds of emissions per million British thermal units (lb of emissions/MMBtu), must be pollutant specific, considering the fuel type and emission controls, and be the nominal emission factors used to develop guaranteed emission levels provided to customers or engine-specific emission factors. These factors are to be derived from the manufacturer's emission test database and may be corrected for ambient conditions at the test cell; and
- C. The actual fuel usage during the test will be expressed in pounds or MMBtu per hour (lb/hr or MMBtu/hr), as applicable, depending on the units used in Special Condition 9.B., above.

Actual emissions of sulfur dioxide (SO<sub>2</sub>) will be calculated by assuming that the fuel has the maximum sulfur content allowed under Special Condition No. 3 and that 100 percent of the sulfur in the fuel is converted to SO<sub>2</sub>. The permit holder may base these calculations either on full load fuel consumption for the duration of the test or on the actual fuel consumption during each test.

### **Recordkeeping Requirements**

10. Beginning July 2008, the following records shall be maintained at the plant site on a five-year rolling retention basis and be made available at the request of personnel of the TCEQ or any air pollution control agency with jurisdiction. **(08/10)**
  - A. The following data shall be recorded for each test: model of turbine tested, the type of fuel fired, the duration of the test, and whether water injection was used.
  - B. The data required in Special Condition No. 10A shall be recorded daily, and a summary shall be produced monthly that represents emissions from each test cell in lb/hr on a daily basis and tons emitted for the previous 12-month period. The data shall be reduced using the calculation methods specified in Special Condition No. 9.

- C. The daily, monthly, and annual records required in Special Condition No. 10A and B shall be kept in a central location with examples of the method of data reduction including units, conversion factors, assumptions, and the basis of the assumptions.
- D. To demonstrate compliance with Special Condition No. 3, the permit holder must keep records of fuel analyses, as obtained from the supplier on an annual basis for natural gas and on a shipment basis for liquid fuel, or must maintain a contract with the fuel supplier that guarantees compliance. **(06/02)**
- E. The holder of this permit shall document hazardous air pollutant emissions resulting from the operation of all sources at the site to demonstrate compliance with Special Condition No. 14. **(09/04)**
- F. The holder of this permit shall document the check for visible emissions in order to show compliance with Special Condition No. 5. **(01/07)**

#### **Nonattainment New Source Review (NNSR) - Emission Reductions**

- 11. This NNSR permit is issued/approved based on the use of 47.8 tpy of NO<sub>x</sub> emission credits from TCEQ Emission Reduction Credit Certificate (ERCC) No. 2803. This ERCC provides offsets at the ratio of 1.2 to 1 for 39.8 tpy of NO<sub>x</sub> from EPN: TC6. The NO<sub>x</sub> emission rate is for calculation purposes only and is not an enforceable allowable emission rate. **(02/15)**

#### **Additional Permit Requirements**

- 12. A copy of this permit shall be kept at the plant site and made available at the request of personnel from the TCEQ or the local air pollution control agency with appropriate jurisdiction.
- 13. The holder of this permit shall physically identify and mark in a conspicuous location all equipment that has the potential of emitting air contaminants as follows:
  - A. The facility identification numbers as submitted to the Emissions Inventory Section of the TCEQ.
  - B. The EPNs as listed on the maximum allowable emission rates table.
- 14. The holder of this permit shall operate the facilities at this site such that for hazardous air pollutants (HAPs), which have been listed pursuant to § 112(b) of the Federal Clean Air Act:
  - A. Emissions of any single HAP shall not exceed 10 tons per year (tpy).
  - B. Emissions of all HAPs combined shall not exceed 25 tpy. **(09/04)**

Date: February 19, 2015

# Emission Sources - Maximum Allowable Emission Rates

Permit Number 20041 and N196

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities, sources, and related activities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

## Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC1	Test Cell 1 Gas fuel firing	NO <sub>x</sub>	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM <sub>10</sub>	5.3	-
		PM <sub>2.5</sub>	5.3	-
		SO <sub>2</sub>	2.0	-
TC1	Test Cell 1 Liquid fuel firing	NO <sub>x</sub>	181.5	-
		CO	88.8	-
		VOC	20.4	-
		PM	15.7	-
		PM <sub>10</sub>	15.7	-
		PM <sub>2.5</sub>	15.7	-
		SO <sub>2</sub>	7.5	-
TC1	Test Cell 1 - Annual Emission Rate Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM <sub>10</sub>	-	10.7
		PM <sub>2.5</sub>	-	10.7
		SO <sub>2</sub>	-	2.9

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC2	Test Cell 2 Gas Fuel Firing	NO <sub>x</sub>	8.7	-
		CO	18.4	-
		VOC	4.7	-
		PM	0.7	-
		PM <sub>10</sub>	0.7	-
		PM <sub>2.5</sub>	0.7	-
		SO <sub>2</sub>	0.4	-
TC2	Test Cell 2 Liquid Fuel Firing	NO <sub>x</sub>	13.0	-
		CO	37.0	-
		VOC	4.7	-
		PM	3.5	-
		PM <sub>10</sub>	3.5	-
		PM <sub>2.5</sub>	3.5	-
		SO <sub>2</sub>	1.5	-
TC2	Test Cell 2 – Annual Emission Rates Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	8.7
		CO	-	9.2
		VOC	-	0.9
		PM	-	1.9
		PM <sub>10</sub>	-	1.9
		PM <sub>2.5</sub>	-	1.9
		SO <sub>2</sub>	-	0.8



Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC3	Test Cell 3 Gas Fuel Firing	NO <sub>x</sub>	80.0	-
		CO	84.8	-
		VOC	13.5	-
		PM	2.5	-
		PM <sub>10</sub>	2.5	-
		PM <sub>2.5</sub>	2.5	-
		SO <sub>2</sub>	1.1	-
TC3	Test Cell 3 Liquid Fuel Firing	NO <sub>x</sub>	120.0	-
		CO	45.6	-
		VOC	7.2	-
		PM	15.7	-
		PM <sub>10</sub>	15.7	-
		PM <sub>2.5</sub>	15.7	-
		SO <sub>2</sub>	4.8	-
TC3	Test Cell 3 – Annual Emission Rates Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	35.9
		CO	-	19.4
		VOC	-	1.8
		PM	-	10.7
		PM <sub>10</sub>	-	10.7
		PM <sub>2.5</sub>	-	10.7
		SO <sub>2</sub>	-	2.7

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC4	Test Cell4 Gas Fuel Firing	NO <sub>x</sub>	106.9	-
		CO	84.8	-
		VOC	46.6	-
		PM	5.3	-
		PM <sub>10</sub>	5.3	-
		PM <sub>2.5</sub>	5.3	-
		SO <sub>2</sub>	2.0	-
TC4	Test Cell 4 Liquid Fuel Firing	NO <sub>x</sub>	181.5	-
		CO	41.3	-
		VOC	14.3	-
		PM	15.7	-
		PM <sub>10</sub>	15.7	-
		PM <sub>2.5</sub>	15.7	-
		SO <sub>2</sub>	7.5	-
TC4	Test Cell 4 Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	100.2
		CO	-	27.7
		VOC	-	9.4
		PM	-	10.7
		PM <sub>10</sub>	-	10.7
		PM <sub>2.5</sub>	-	10.7
		SO <sub>2</sub>	-	2.9

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC5	Test Cell 5 Gas Fuel Firing	NO <sub>x</sub>	192.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	8.5	-
		PM <sub>10</sub>	8.5	-
		PM <sub>2.5</sub>	8.5	-
		SO <sub>2</sub>	3.8	-
TC5	Test Cell 5 Liquid Fuel Firing	NO <sub>x</sub>	338.8	-
		CO	30.0	-
		VOC	8.8	-
		PM	12.1	-
		PM <sub>10</sub>	12.1	-
		PM <sub>2.5</sub>	12.1	-
		SO <sub>2</sub>	14.1	-
TC5	Test Cell 5 – Annual Emission Rates Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	39.5
		CO	-	9.0
		VOC	-	2.7
		PM	-	3.7
		PM <sub>10</sub>	-	3.7
		PM <sub>2.5</sub>	-	3.7
		SO <sub>2</sub>	-	2.0

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
TC6	Test Cell 6 Gas Fuel Firing	NO <sub>x</sub>	298.43	-
		CO	26.00	-
		VOC	1.49	-
		PM	4.21	-
		PM <sub>10</sub>	4.21	-
		PM <sub>2.5</sub>	4.21	-
		SO <sub>2</sub>	0.35	-
TC6	Test Cell 6 Liquid Fuel Firing	NO <sub>x</sub>	409.53	-
		CO	26.29	-
		VOC	7.50	-
		PM	13.60	-
		PM <sub>10</sub>	13.60	-
		PM <sub>2.5</sub>	13.60	-
		SO <sub>2</sub>	3.04	-
TC6	Test Cell 6 – Annual Emission Rates Gas and Liquid Fuel Firing	NO <sub>x</sub>	-	39.78
		CO	-	7.95
		VOC	-	0.82
		PM	-	1.85
		PM <sub>10</sub>	-	1.85
		PM <sub>2.5</sub>	-	1.85
		SO <sub>2</sub>	-	0.76

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lb/hour	TPY (4)
F1	TC1, TC3-5 Process Fugitives (5)	VOC	0.6	0.3
F2	TC2 Process Fugitives (5)	VOC	0.3	0.1
F3	TC6 Process Fugitives (5)	VOC	0.01	0.01
S1	Oil/Water Separator	VOC	0.1	0.3
S2	TC6 Oil/Water Separator	VOC	0.01	0.05
CT1	Cooling Tower	VOC	0.08	0.37
		PM	0.60	2.63
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.01	0.03
		Cl <sub>2</sub>	<0.01	<0.01
CT3	Cooling Tower	VOC	0.1	0.4
		PM	0.60	2.63
		PM <sub>10</sub>	0.15	0.66
		PM <sub>2.5</sub>	0.01	0.03
		Cl <sub>2</sub>	<0.01	<0.01
CT4	TC6 Cooling Tower	VOC	0.08	0.37
		PM	0.60	0.26
		PM <sub>10</sub>	0.02	0.09
		PM <sub>2.5</sub>	<0.01	<0.01
		Cl <sub>2</sub>	<0.01	<0.01

(1) Emission point identification - either specific equipment designation or emission point number from plot plan.

(2) Specific point source name. For fugitive sources, use area name or fugitive source name.

(3) NO<sub>x</sub> - total oxides of nitrogen

CO - carbon monoxide

VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1

PM - total particulate matter, suspended in the atmosphere, including PM<sub>10</sub> and PM<sub>2.5</sub>

PM<sub>10</sub> - total particulate matter equal to or less than 10 microns in diameter, including PM<sub>2.5</sub>

Emission Sources - Maximum Allowable Emission Rates

PM<sub>2.5</sub> - particulate matter equal to or less than 2.5 microns in diameter  
SO<sub>2</sub> - sulfur dioxide  
Cl<sub>2</sub> - chlorine

- (4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period.  
(5) Emission rate is an estimate and is enforceable through compliance with the applicable special condition(s) and permit application representations.

Date: December 16, 2014